

**September 1, 2000**

MEMORANDUM

**SUBJECT:** Revision to the Technical Assistance Document for Sampling and Analysis of Ozone Precursors

**FROM:** J. David Mobley, Acting Director  
Emissions, Monitoring, and Analysis Division (MD-14)

**TO:** Deputy Director, Office of Ecosystem Protection, Region I  
Director, Environmental Planning and Protection Division, Region II  
Director, Air Protection Division, Region III  
Director, Air, Pesticides, and Toxics Management Division, Region IV  
Director, Air and Radiation Division, Region V  
Director, Multimedia Planning and Permitting Division, Region VI  
Director, Air, RCRA and Toxics Division, Region VII  
Director, Air and Radiation Program, Region VIII  
Acting Director, Air Division, Region IX  
Director, Office of Air, Region X  
Director, Office of Environmental Measurement and Evaluation, Region I  
Director, Environmental Services and Assessment Division, Region II  
Director, Environmental Services Division, Regions III and VII  
Director, Science & Ecosystems Support Division, Region IV  
Director, Resource Management Division, Region V  
Assistant Regional Administrator, Management Division, Region VI  
Assistant Regional Administrator, Office of Technical and Management Services, Region VIII  
Assistant Regional Administrator, Office of Policy and Management, Region IX  
Director, Office of Environmental Assessment, Region X

The purpose of this memorandum is to provide a revised procedure for measuring oxides of nitrogen ( $\text{NO}_x$ ) and total reactive oxides of nitrogen ( $\text{NO}_y$ ) for the Technical Assistance Document (TAD) for Sampling and Analysis of Ozone Precursors. This document was initially published in October 1991 and intended to provide guidance in support to the enhanced ozone monitoring revisions in 40 CFR Part 58, Photochemical Assessment Monitoring Stations (PAMS). Since the initial publication, there have been significant advances in the methodology used to measure the parameters of interest at PAMS. These advances necessitated a major rewrite and revision of the TAD by the Office of Research and Development in September 1998 (EPA/600-R-98/161).

A minor revision to Section 1, "Introduction" was made to include a paragraph on page 3 that clarifies the intent and limitations of guidance given in the TAD.

The revision to Section 4, "Methodology for Measuring Oxides of Nitrogen and Total Reactive Oxides of Nitrogen in Ambient Air" was made to include the current state of knowledge and technology associated with measuring NO<sub>y</sub>. Updated information has been incorporated on the procedure for measurement, procedures for calibration, discussion of converter types and determination of converter efficiency, discussion of the use of photolytic converters, and discussion of potential measurement problems and interferences. The document also addresses methodology for measuring NO<sub>x</sub>, as required by PAMS. A final revision 2 of Section 4 is enclosed. This section has undergone internal peer review and is a replacement for the current section in the TAD. Please remove the Table of Contents and Section 4 of your TAD and replace them with the enclosed revisions.

Should you have any questions or comments regarding this Section, please contact Joann Rice of the Monitoring and Quality Assurance Group at 919-541-3372.

#### Attachments

cc: Mark Allen, WI DNR  
Lee Alter, NESCAUM  
George Apgar, VT DEP  
Manny Aquitania, Region IX  
Steve Barbosa, APCD  
Norm Beloin, Region I  
Garry Boynton, NY DEC  
Peter Brodek, IN DEM  
Catherine Brown, Region III  
Douglas Chatham, GA DNR  
Kuenja Chung, Region VI  
Jeff Cook, CARB  
Walter Cooney, MD Dept. of Environment  
John Cucco, RI Dept. of Health  
Rob Dombro, IL EPA  
Jim Ellis, CT DEP  
Lisa Ehrlich, NJ DEP  
Ted Erdman, Region III  
Marshall Ervine, VA DAPC  
Phil Galvin, NY DEC  
Richard Guillot, Region IV  
Chris Hall, Region X  
Jim Hazlett, LA DEQ  
Ron Heavner, Region VIII  
Gordon Jones, Region V

Mary Kemp, Region VI  
Mike Koerber, LADCO  
David Krask, DC ARMD  
Loretta Lehrman, Region V  
Steve Lengerich, IN DEM  
Al Leston, CT DEP  
Jerome Mazurek, IL EPA  
Rick Mayo, ME DEP  
Bill McClenny, NERL  
Tom McGrath, MA DEP  
Ned Meyer, OAQPS  
Ed Michel, TNRCC  
Edward Millar, WI DNR  
Jeff Miller, PA DEP  
Tom Monosmith, MI DEQ  
Marylee Mullen, ME DEP  
Mustafa Mustafa, Region II  
Allen Oi, Region I  
Bill Oslund, CARB  
Barbara Parzygnat, OAQPS  
Charles Pietarinen, NJ DEP  
Joann Rice, OAQPS  
Anil Roychowdhury, Region VI  
Paul Sanborn, NH DES  
Mark Sather, Region VI  
Rich Scheffe, OAQPS  
Jerry Sheehan, MA DEP  
Scott Scheller, APCD  
Paul Sierzenga, NY DEC  
John Silvasi, OAQPS  
Dick Siscanaw, Region I  
Steve Spaw, TNRCC  
John Stewart, DE DNREC  
Avi Teitz, Region II  
Alan VanArsdale, Region I  
Manop Vanichchagorn, LA DEQ  
Susan Wierman, MARAMA  
Susan Zimmer-Dauphinee, GA DNR

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